QUARTERLY SUMMARY

OF THE

IMPROVEMENTS AND DISCOVERIES

IN THE

MEDICAL SCIENCES.

ANATOMY AND PHYSIOLOGY.

1. *Vaso-motor Centres in the Cord.*—N. Bothling agrees with Goltz that there are vaso-motor centres in the spinal cord, which may act on the vessels after cutting the cord, and which may be paralyzed by narcotics such as chloral hydrate. His results differ, however, from those of Goltz in respect to the vaso-motor fibres in the sciatic. Irritation of this nerve, the present author always found to contract the vessels, lowering the temperature, whereas Goltz obtained the opposite effect. The author suggests that there may be inhibitory fibres in the sciatic, which cause dilatation of the vessels, and that Goltz may have irritated them, while his mode of experimentation did not. Stricker adds in a note that he has, since the above paper was written, actually proved the existence of such depressor fibres, which he will describe in a future paper.—*Glasgow Medical Journal*, July, from *Stricker's Jahrbücher*, Pts. i. and ii. 1876.

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2. *The Relations of the Serous Channels to the Bloodvessels.*—Dr. P. Foa, Montava, has published the result of experiments on the frog, and is of interest as confirming some former views, and as rendering still more certain the intimate relation of the serous spaces with the bloodvessels on the one hand and the lymphatics on the other. In the first series of experiments the observations of Arnold are confirmed, in respect that after the vessels have been altered by a venous congestion, an injection-material thrown into the arteries penetrates from these vessels to the serous channels. But this author goes further, he finds that without any previous disturbance of the circulation he can inject the serous channels from the bloodvessels, if before the colouring matter a solution of phosphate of soda has been thrown into the vessels. With the living animal, however, his results are even more convincing, for he was able to inject the serous spaces without any previous washing out of the vessels with phosphate of soda. Under ordinary circumstances considerable pressure was needed to effect this; but if curare had been previously administered, it was much easier. The probability is that the injection in the former case irritates the vessels, and, causing them to contract, opposes a great obstacle to further injection. When curare is given, the vessels are relaxed. The author has some further observations on the path by which the colouring matter passes from the vessels to the serous spaces. After injecting vermilion or China ink, he washed out the vessels, and then found that the pigment marked out the borders of the endothelial cells, just like nitrate of silver; that in fact the solid granules of pigment were stuck in the cement between these cells. This seems to show that the pigment passed out through the cement

substance, which must be a semi-fluid substance with interstices in it. Some further experiments seemed to show that in the neighbourhood of inflamed parts the vessel wall is more permeable than normal. The author's injections were more successful in filling the serous spaces in such situations.—*Glasgow Medical Journal*, July, from *Virchow's Archiv*, Pt. iii. Dec. 1875.

MATERIA MEDICA, GENERAL THERAPEUTICS, AND PHARMACY.

3. *Salicine as an Antipyretic.*—Prof. SENATOR states that salicine administered in doses of two and a half to six grammes lowers the temperature in some febrile diseases just as certainly as salicylic acid does. He has used it in typhoid fever, phthisis, and parametritis. Dr. Maclagan has shown that salicine has the same specific action in acute rheumatism as salicylic acid, into which, according to the researches of Ranke, Lehmann, and others, it is converted in the blood. Salicine is less unpleasant to take than salicylic acid. It can be given in powder mixed with sugar, or, better, in the form of pills. Its price is somewhat less than that of the acid and its salts, and no doubt, if the demand for it increases, it will be still cheaper, for it can be procured in abundance from poplars and willows. Salicylate of ammonia is recommended by Dr. Martenson, of St. Petersburg, as a substitute for salicylic acid. It is easily prepared by saturating an aqueous emulsion of the latter with ammonia or carbonate of ammonia. It is easily soluble in water and alcohol, has a sweet taste, and contains nearly 89 per cent. of acid.—*Med. Times and Gaz.*, July 29, from *Centralblatt Med. Wiss.*, No. 14, 1876.

4. *Physiological Action of Condurango.*—Dr. T. LAUDER BRUNTON has published in our excellent cotemporary, the *Journal of Anatomy and Physiology* (April, 1876), a number of experiments instituted by him to determine the physiological action of condurango. "The general result of all these experiments is that condurango is physiologically inert."

5. *Action of Salicylic Acid in Diphtheria.*—L. LETZERICH states that diphtheritic organisms (fungi obtained from the urine of children suffering severely from diphtheria, and consisting of bacteria, masses of protoplasm and micrococci) placed in a closed vessel with solution of salicylic acid containing 0.35 of the acid, one part of spirit and 59 of water, when examined after an interval of five months, were all found lying dead at the bottom of the vessel. A few drops of weak solution of salicylic acid (of about one-third the above strength) brought into contact with diphtheritic organisms arrested the movements of the bacteria present gradually; stronger solutions arrested them suddenly. The plasma corpuscles lost their brilliancy and acquired a double outline, as if they were surrounded by an extremely delicate membrane; the substance of the protoplasm appeared to contain bubbles of air. Letzerich treated seven cases of diphtheritis with gargles of salicylic acid, and all of them successfully. In two other instances powdering the surface with a little dry salicylic acid proved very effective. From these and other observations and experiments he believes that salicylic acid is a powerful anti-diphtheritic agent. —*Practitioner*, Aug., from *Centralblatt für die Chirurgie*, No. 3, 1876.

6. *Bromohydric Acid.*—Dr. J. MILNER FOTHERGILL states that this acid can be obtained by dissolving ℥x, ʒvj, gr. xxviij of bromide of potassium in four pints of water, then add ℥xiij, ʒj, gr. xxxvij of tartaric acid. The bitartrate of potash is precipitated, and the hydrobromic acid remains in a clear bright, almost colourless fluid, possessing an acid taste and the ordinary acid properties, as well as the peculiar properties of bromide of potassium, as compared with any other salt of potash.